March 5, 1940. K. C. EAGLEY 2,192,862

LUBRICANT HANDLING APPARATUS

Filed July 20, 1937 2 Sheets-Sheet 1

Fig. 1.

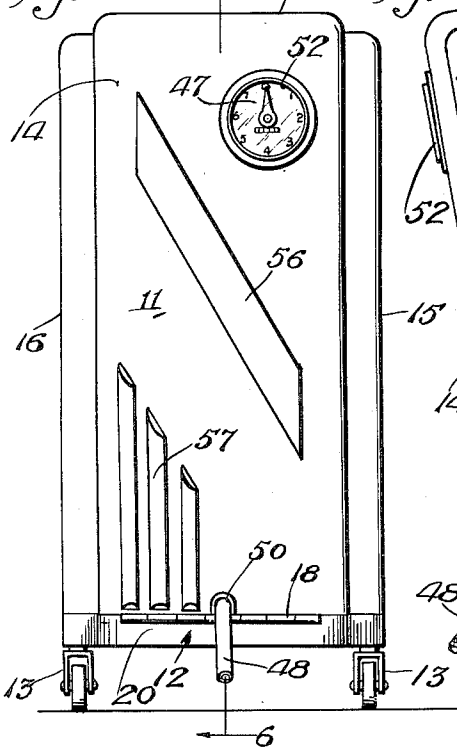


Fig. 2.

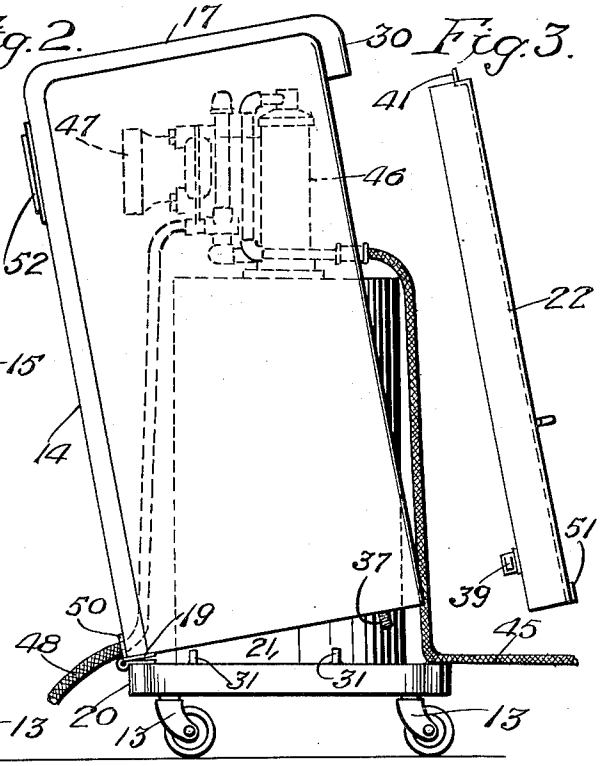


Fig. 3.

Fig. 4.

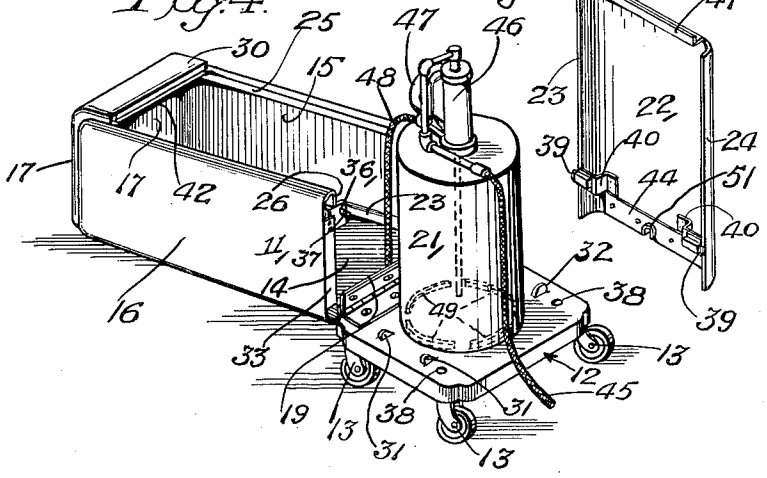


Fig. 5.

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Filed July 20, 1937 2 Sheets-Sheet 2

Fig. 6.

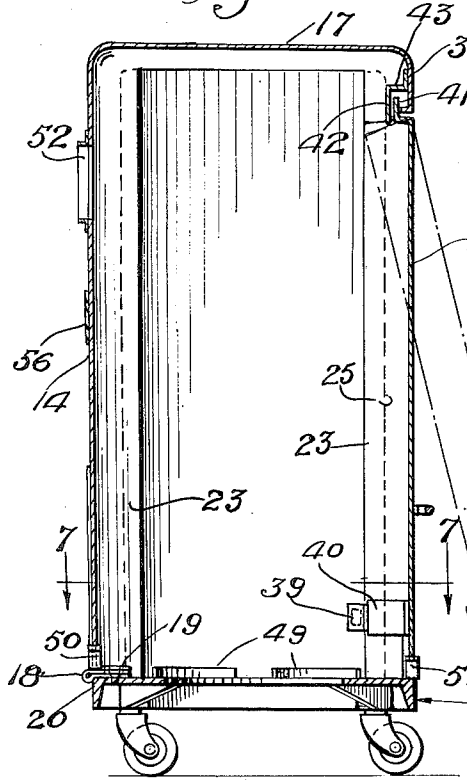


Fig. 10.

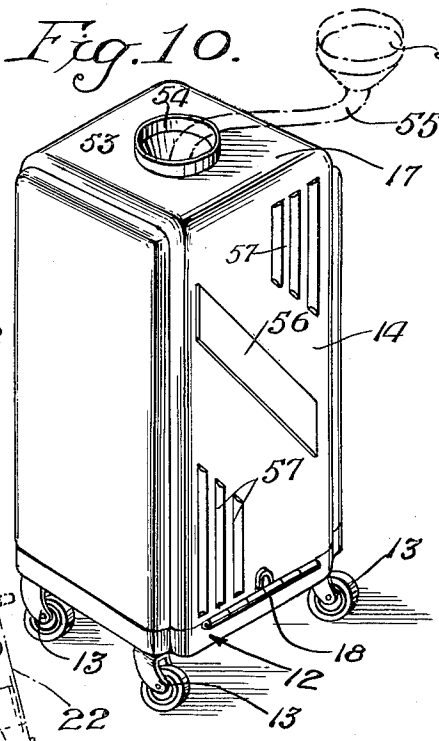


Fig. 8.

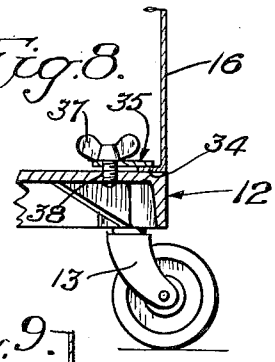


Fig. 7.

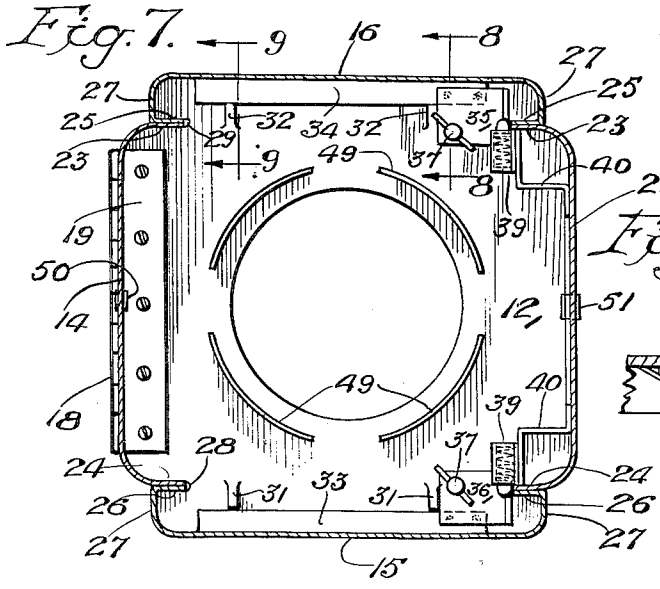
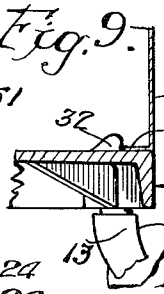


Fig. 9.



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Patented Mar. 5, 1940 2,192,862

UNITED STATES PATENT OFFICE

2,192,862

LUBRICANT HANDLING APPARATUS

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Application July 20, 1937, Serial No. 154,539

8 Claims. (Cl. 221—68)

The present invention relates to lubricant drum cabinets and more particularly to the type of drum cabinets required for automotive service.

The object of the present invention is to provide a cabinet for housing drums of lubricant that may readily be replenished with new drums as required.

Another object of the present invention is to provide a readily accessible cabinet that will permit the removal of old drums of lubricant and the replacement of new drums with ease and despatch.

A further object of the present invention is to provide a strong and durable cabinet for housing lubricant drums and yet one that is easily disassembled so as to expose the interior thereof for the withdrawal or replacement of lubricant drums.

A further object of the present invention is to provide a lubricant drum cabinet that will not only completely enclose a lubricant dum but also its associated pumping or dispensing mechanism, so as to shield the same from view.

The present invention consists of a novel relationship between lubricant reservoir, lubricant receiver or dispenser and base and housing therefor, whereby not only the lubricant reservoir but also the lubricant dispensing mechanism may be completely concealed from view by a single housing capable of giving ready access to the entire lubricant reservoir as well as dispensing pump, whereby the advantages of complete enclosure as well as the advantages of ready accessibility may be advantageously combined.

The present invention further consists of a novel combination of lubricant reservoir and dispensing pump and base and housing therefor, wherein the base, reservoir and pump may remain stationary while the housing is swung about an axis of pivotation into either one of two positions, that is, into an encasing position, or into an inoperative or clearance position without disturbing either the reservoir or dispensing pump carried thereby while the housing is swung into either one or the other of its two positions.

The present invention further consists of other novel features and details of construction all of which will appear more fully from the following detailed description and accompanying drawings and as more particularly set forth in the claims hereto appended.

For the purpose of illustrating the invention, there is shown in the accompanying drawings two forms thereof which are at present preferred, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and that the invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawings in which like reference characters indicate like parts:

Figure 1 represents a front elevational view of one form of a lubricant dispensing drum cabinet embodying the present invention.

Figure 2 represents a side elevational view of the cabinet shown in Figure 1 with the upper hinged panel unit arrested in an intermediate partially opened position.

Figure 3 represents a side elevational view of the removable panel of the cabinet illustrated in Figures 1 and 2.

Figure 4 represents a perspective view on a smaller scale of the same cabinet in its completely disassembled position.

Figure 5 represents an inside perspective view of the removable panel of the cabinet illustrated in Figure 4.

Figure 6 represents a section taken on line 6—6 of Figure 1 looking in the direction of the arrows.

Figure 7 represents a section on an enlarged scale taken on line 7—7 of Figure 6 looking in the direction of the arrows.

Figure 8 represents a section on an enlarged scale taken on line 8—8 of Figure 7, looking in the direction of the arrows.

Figure 9 represents a section on an enlarged scale on line 9—9 of Figure 7, looking in the direction of the arrows.

Figure 10 represents a perspective view of a lubricant-receiving drum cabinet forming another embodiment of the present invention.

One embodiment of the present invention illustrated in Figures 1 to 9, inclusive, consists of a cabinet 11 adapted to house within it lubricant-receiving or lubricant-dispensing drums, and so arranged as to be readily dismantled or disassembled so as to permit of ready access to the inside thereof and further permit of the unhindered replacement or removal of a lubricant drum.

The housing cabinet 11 includes a drum supporting base 12 which may be of a generally rectangular outline or if the cabinet is to be of cylindrical rather than rectangular form, this base may be of a circular outline. This drum-supporting base 12 is preferably mounted on a

plurality of freely pivoted casters 13 which permit of the ready movement of the cabinet assembly to any desired location.

The side shielding panels 14, 15 and 16, and the top shielding panel 17 of the cabinet 11 are preferably permanently united, and in the disassembling operation to be hereinafter described in greater detail, these united panels are capable of pivoting about an edge 20 of the drum-supporting base 12 by means of a hinge 18 extending along the major portion of the edge 20 of the base 12. The upper leaf of this hinge 18 is secured to an inturned flange 19 formed along the lower edge of, and integrally with the side panel 14, the lower leaf of the hinge 18 being secured to the top front edge 20 of the base 12.

These pivoting side and top shielding panels 14, 15, 16 and 17 are separate and distinct from the cabinet drum-supporting base 12 and are adapted to be jointly pivoted about the front base edge 20 until the upper portion of the panel 14 meets the floor surface. In this position the upper surface of the base 12 is fully exposed, and as may be seen in Figure 4, the lubricant drum 21 may then readily be lifted into its proper position on the drum-supporting base 12 or removed therefrom, the cabinet panels which have been jointly swung down to the floor not hindering in any manner the replacement or removal of the drum. The shielding side panel 22 is made removable so as to permit the drum-shielding panels 14, 15, 16 and 17 to be lowered to the floor from their encasing position without interfering with the enclosed lubricant drum and associated pumping mechanism. This removable side panel 22 may be provided with two inturned side flanges 23 and 24 adapted to be operatively interposed between corresponding side flanges 25 and 26 disposed along side edges of the two shielding panels 15 and 16.

The two cabinet side panels 15 and 16 of the cabinet are provided with short inturned segments 27 and inturned end flanges 25 and 26 forming channel units which give the cabinet greater strength.

The cabinet panels 14 and 22, respectively, may be of a shallow U-shaped cross-section, with the inturned ends 23 and 24 of these two panels, which constitute the short legs of the U, meeting the corresponding adjacent inturned panel end flanges 25 and 26. The shielding panel 14 is preferably permanently united to the shielding panels 15 and 16 by welding together the adjacent edges 28 and 29 of these panels; the removable shielding panel 22 being adapted for removable engagement with these panels 15 and 16. The top panel 17 as well as its adjacent short upper panel 30 may be formed in continuation of the front panel 14 and are both preferably of the same cross-sectional shape.

The drum-supporting base 12 may be provided with a series of guiding lugs 31 and 32 which coact with the edges of inturned flanges 33 and 34 formed along the lower edges of the panels 15 and 16, respectively, to guide the downwardly descending flanges 33 and 34 and thus guide the tilting portion of the cabinet into its proper vertical position with respect to the lubricant drum-supporting base 12, and prevent any misalignment or "twisting" of the tilting portion of the cabinet with respect to this base. A pair of short angular shaped combined door stop and anchoring plates 35 and 36 may be spot welded to the upper surface of the bottom inturned side panel flanges 33 and 34, these plates serving a dual purpose, firstly, to act as a door stop for the lower portion of the removable panel 22, and secondly to act as anchoring means for detachably securing the tilting portion of the cabinet to the bottom drum-supporting base 12. Wing bolts 37 may be provided to pass through suitable holes in these anchor plates 35 and 36 and adapted for screw-threaded engagement with correspondingly aligned screw threaded openings 38 in the base 12.

Panel-locking snap-catches 39 may be secured to the inside edges of the lower end of the removable panel 22, by means of the catch-supporting brackets 40; the outwardly projecting spring-pressed tongues of these catches coacting with the edges of the inturned panel side flanges 25 and 26 to hold the removable panel 22 in place.

The removable panel 22 may be placed in its operative position after the tilting portion of the cabinet has been swung from the floor to an upright position, by inserting its upper projecting flange 41 into a corresponding panel-securing slot 42 formed along the under side of the fixed short upper panel 30. This slot or opening 42 may be formed by securing a member 43 of Z-shaped cross-sectional area to the inner surface of the upper panel 30, as illustrated particularly in Figure 6. The lower end of the removable panel 22 is then rotated from its position as outlined in dashed and dotted lines in Figure 6;—its lower end approaching and entering between the inturned panel side flanges 25 and 26 until it abuts the stops 35 and 36, when the snap-catches 39 lock this panel 22 in its now vertical position. If desired, the panel 22 may be provided with a reinforcing plate 44 along the inside of the lower edge thereof, thus serving to prevent any bending or twisting of this removable panel.

As illustrated particularly in Figures 2 and 4, a lubricant-supply unit, which ordinarily would consist of a lubricant drum 21, an air supply hose 45, an air operated and detachably secured pumping unit 46, a flow registering meter 47 and a lubricant-dispensing hose 48 may be placed upon the cabinet base 12 and may be aligned therewith by means of arcuate drum-centering base ribs 49 which guide the depending lower rim of the lubricant drum 21 into its proper central position with respect to the drum-supporting base 12. Two hoses 45 and 47 may pass through suitable openings 50 and 51 centrally located with respect to the lower edges of the shielding panels 14 and 22, respectively, the air hose being led from a compressed air source, and the lubricant hose leading to a lubricant-dispensing nozzle. If desired, these two hoses may both pass through the same opening in either the front or the rear panel. Should a compressed air high-pressure booster unit be provided at the lubricant-dispensing nozzle at the end of the lubricant hose, a third or additional hose carrying air would be furnished leading from the air supply inlet of the pump unit 46 through the opening 50 in the shielding panel 14 and ending at the booster unit.

The shielding panel 14 may also be provided with a suitable window opening 52 which will expose to view the inner flow registering meter 47, should such a meter be included in the lubricant dispensing assembly.

In the embodiment illustrated in Figure 10, the hinged cabinet houses a lubricant-receiving drum as distinguished from a lubricant-dispensing drum (sometimes the original shipping drum). The upper panel 53 has an opening formed therein which seats a waste oil receiving funnel or cup

54 when it is in its inoperative position as indicated in full lines in Figure 10. In use, this funnel-shaped member 54 is withdrawn from its seat in the top panel 53 and extended to any desired position as indicated in dashed and dotted lines. The waste oil may be conducted from this funnel member 54 to the lubricant-receiving drum, disposed within the hinged cabinet, by means of any suitable flexible oil conduit 55. In other respect the cabinet illustrated in Figure 10 is similar to that illustrated in Figures 1 to 9, inclusive.

In operation, the shielding panel 22 is removed, the hinged panel unit is swung to the floor, and a lubricant supply drum or empty lubricant-receiving drum is placed upon the lubricant drum-supporting base 12 and aligned therewith by means of the arcuate drum-centering base ribs 49. If the unit is intended for use as a lubricant dispenser, the pumping unit 46 and its associated flow meter, if there be one, are then detachably secured to the upper end of the lubricant supply drum. The lubricant hose 48 is then passed through the lower hose opening 50 in the shielding panel 14 and this hose together with the air supply hose 45 may then be respectively secured to the lubricant outlet and air inlet openings of the air-driven pumping unit 46. The pivoting portion of the cabinet, consisting of the shielding side panels 14, 15 and 16, and the upper shielding panel 17 is then raised to a vertical position, the base lugs 31 and 32 serving to guide the side panel flanges 33 and 34, respectively, and thus place the panel unit in proper alignment with the corresponding edges of the drum-supporting base 12. The wing bolts 37 are thus also brought into operative juxtaposition with the screw threaded openings 38 in the base 12. This pivoting portion of the cabinet is then secured in its upright position by screw-threadedly engaging these wing bolts 37 with the screw-threaded base openings 38. The upper panel-securing flange 41 of the closure panel 22 is then inserted into the longitudinal opening 42, and the bottom of this closure member 22 is then moved toward the base and inserted between the inturned side panel flanges 25 and 26 and brought up against the angular stop plates 35 and 36, the snap-catches simultaneously locking the bottom of this rear panel 22 in a vertical position. The cabinet is then ready for use, and may be wheeled to any desired location.

If desired, a prong or hook may be provided on the cabinet for supporting the free end of the lubricant hose and its associated lubricant dispensing nozzle when not in use. A pull or handle may also be provided on the exterior of the closure panel 22 to facilitate the removal and the replacement of this panel.

The panel 14 may also be provided with a diagonal identifying stripe 56 adapted to have superimposed thereon any suitable indicia which will serve to clearly and readily indicate the character and class of lubricant housed within the cabinet. Typical of such identifying expressions are terms such as "chassis", "spring spray", "gear lube", and "oil drain", etc., the latter term being appropriate for the type of cabinet illustrated in Figure 10.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having thus described the invention, what is hereby claimed as new and desired to be secured by Letters Patent is:

1. A lubricant receiving device including a base, a lubricant receiving reservoir carried on said base and spaced inwardly from the outermost boundaries thereof, a laterally extensible lubricant receiving funnel member operatively connected with the top of said lubricant receiving reservoir by means of lubricant flow conducting means, a housing carried by said base exteriorly of said lubricant reservoir and completely encasing the same, said housing being hingedly connected with said base and capable of being swung generally clear of said lubricant receiving reservoir, said housing having an upper perforated opening for seating said funnel member when in its non-extended position.

2. A readily transportable lubricant service cabinet for operatively housing a relatively large-sized up-ended lubricant drum while lubricant is being either supplied to or dispensed from said drum, said cabinet being substantially greater in height than width or depth and including a low drum-supporting base mounted on caster wheels and a housing having side walls generally extending the full height of said cabinet and including a removable side panel operatively engageable therewith, said housing being pivotally connected at a lower edge thereof to said low base, thereby to permit said housing to be swung to the floor clear of said up-ended drum to provide access thereto.

3. A lubricant service cabinet for operatively housing a relatively large-sized up-ended lubricant drum while lubricant is being either supplied to or dispensed from said drum, said cabinet being substantially greater in height than in width or depth and including a low drum-supporting base and a housing having side walls generally extending the full height of said cabinet and including a top panel, three generally perpendicular side panels fixedly related to each other and to said top panel along adjoining edges, the central side panel being pivotally connected at a lower edge thereof to said low base, and a removable side panel operatively engageable with and disengageable from said fixedly related panels to permit the latter jointly to be swung to the floor clear of said up-ended drum to provide access thereto.

4. A lubricant service cabinet for operatively housing a relatively large-sized up-ended lubricant drum while lubricant is either being supplied to or dispensed from said drum, said cabinet being substantially greater in height than in width or depth and including a low drum-supporting base and a housing having side walls generally extending the full height of said cabinet and including a removable side panel operatively engageable therewith, said housing being pivotally connected at a lower edge thereof to said low base, thereby to permit said housing to be swung to the floor clear of said up-ended drum to provide access thereto, said removable panel being engageable with said cabinet generally opposite the pivotal connection between said housing and said base.

5. A lubricant service cabinet for housing lubricant dispensing apparatus operable interiorly of said cabinet and including a lubricant pump associated with an up-ended lubricant drum, said cabinet being substantially greater in height

than in width or depth and including a low drum-supporting base and a housing having side walls generally extending the full height of said cabinet and including a removable side panel operatively engageable therewith, said housing being pivotally connected along a lower edge thereof to said base at a point generally opposite said removable panel thereby to permit said housing to be swung generally clear of said lubricant pump and associated up-ended drum and lowered to the floor to provide access to said dispensing apparatus.

6. A lubricant service cabinet for housing lubricant dispensing apparatus operable interiorly of said cabinet and including an up-ended lubricant drum, a pumping unit and a flow meter, said cabinet being substantially greater in height than in width or depth and including a low drum-supporting base and a housing having side walls generally extending the full height of said cabinet, said housing being spaced from said up-ended lubricant drum, pumping unit and flow meter and including an unbroken top panel, three generally perpendicular side panels fixedly related to each other and to said top panel along adjoining edges, the central side panel being pivotally connected at a lower edge thereof to said low base, one of said fixedly related panels being provided with an aperture for exposing the face of said flow meter to view, and a removable side panel operatively engageable with and disengageable from said fixedly related panels to permit the latter jointly to be swung to the floor clear of said up-ended drum, pump unit and flow meter to provide access thereto.

7. A readily transportable cabinet of the class described including a low base adapted to support a relatively large-sized up-ended lubricant drum, said base being mounted on caster wheels, a multi-piece and separable housing associated with said base and adapted completely to encase said lubricant drum, said housing being substantially greater in height than in width or depth and having side walls generally extending the full height of said cabinet and including one part hingedly connected with the base and another part detachably connectible therewith and with said base, and together forming a generally complete enclosure about said lubricant drum, said base being provided with two series of guiding ribs, one for guiding said lubricant drum into a proper position on said base, and the other for vertically guiding the hingedly connected part of said housing into proper alignment with said base.

8. A lubricant service cabinet for automotive lubricant dispensing and lubricant reception purposes comprising a readily transportable base mounted upon caster wheels, a separate and distinct encasing housing unit hingedly secured to the base, whereby said housing unit may be pivotally lowered to the floor surface thereby to give ready access to the space immediately above said base, guiding means for vertically guiding said housing unit into its properly aligned position with respect to the base, locking means for detachably securing the lower edge of said hinged housing unit to said base, a removable panel adapted for operative engagement with said housing unit in its vertical encasing position, and panel locking means for detachably securing said removable panel in said operative position.

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